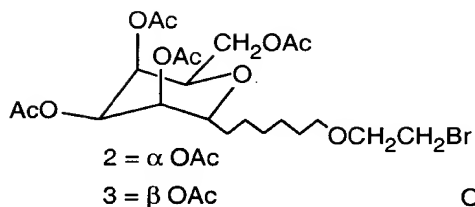


FIG. 3

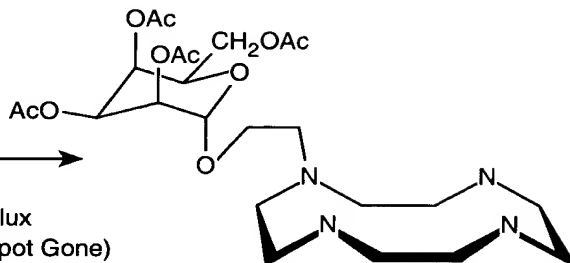
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1 + 2

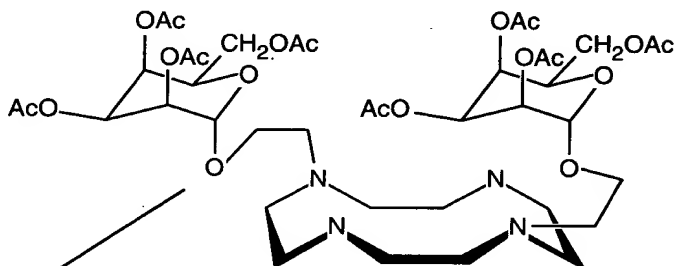
$\xrightarrow{\text{CHCl}_3}$
 48 Hrs Reflux
 T.L.C. (2 Spot Gone)



5 12 = α OH
 (7 = β) 13 = β OH



1



$\sim 2:1$ 6:5
 Silica
 4:1 $\text{CHCl}_3/\text{MeOH}$

6
 (8 = β)

8

- 1.) Hydrolysis Of Acetate
TCA/MeOH / H_2O
- 2.) $\text{BrCH}_2\text{CO}_2\text{H}$ pH = 10
- 3.) FPLC Cation Exchange
pH = 2 Acetic Acid Gradient

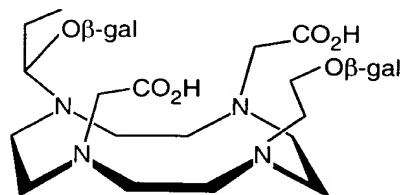


FIG. 4

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+

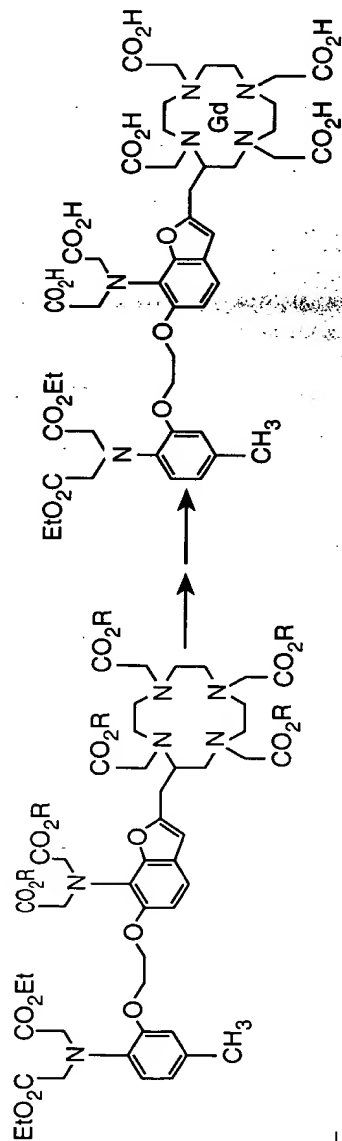
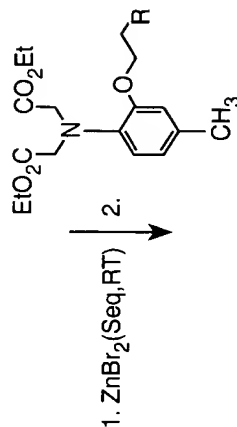
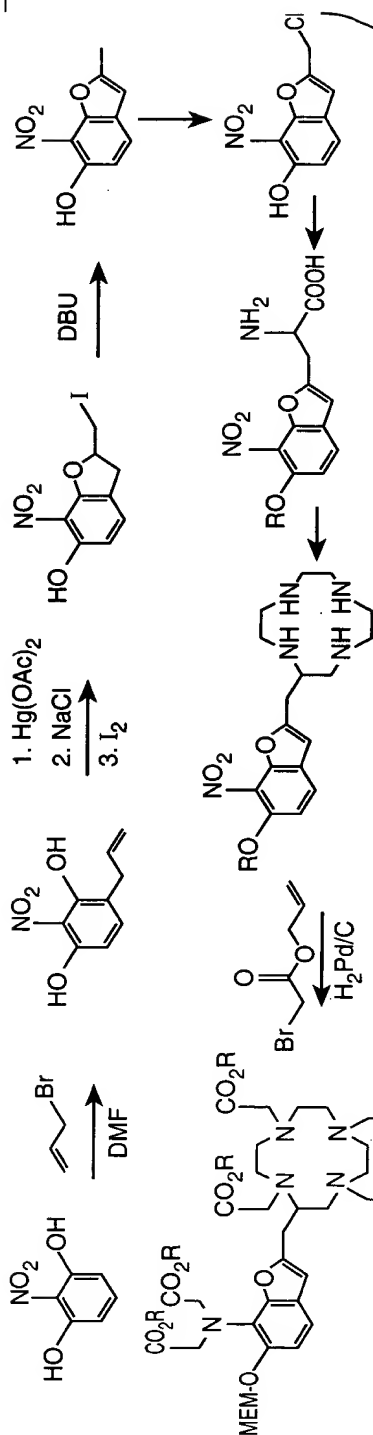
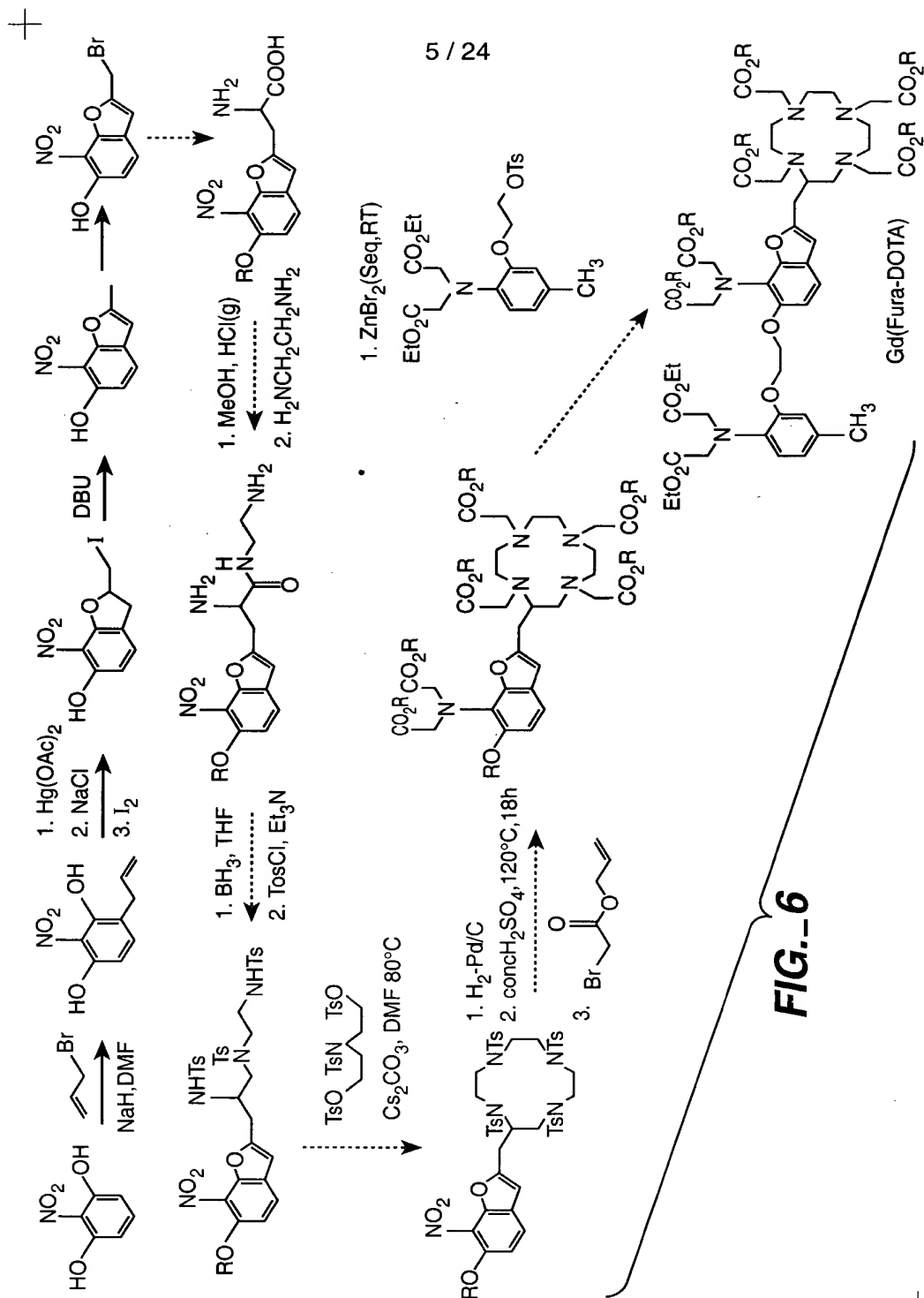
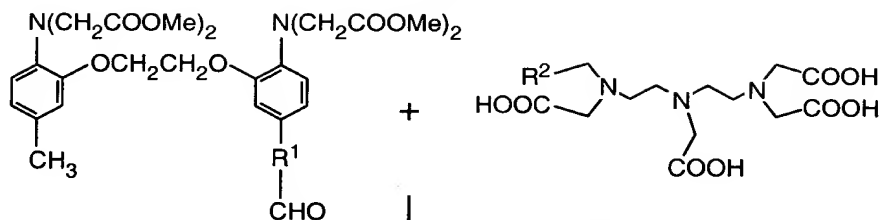


FIG. 5

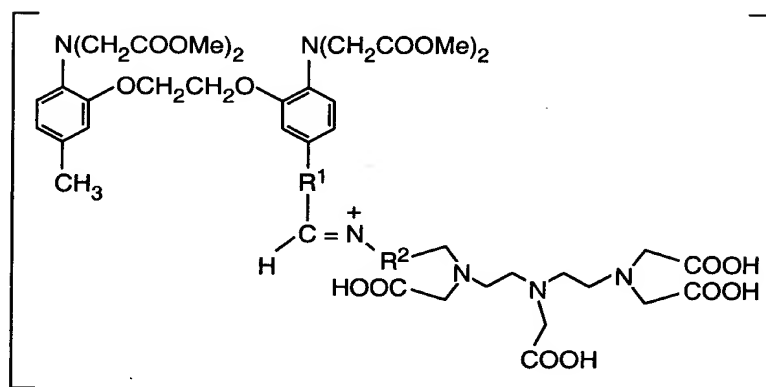
+



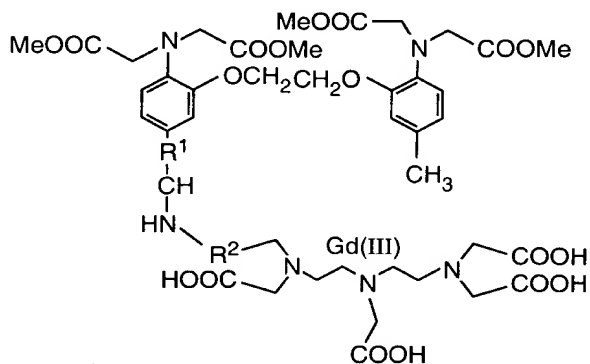
6 / 24



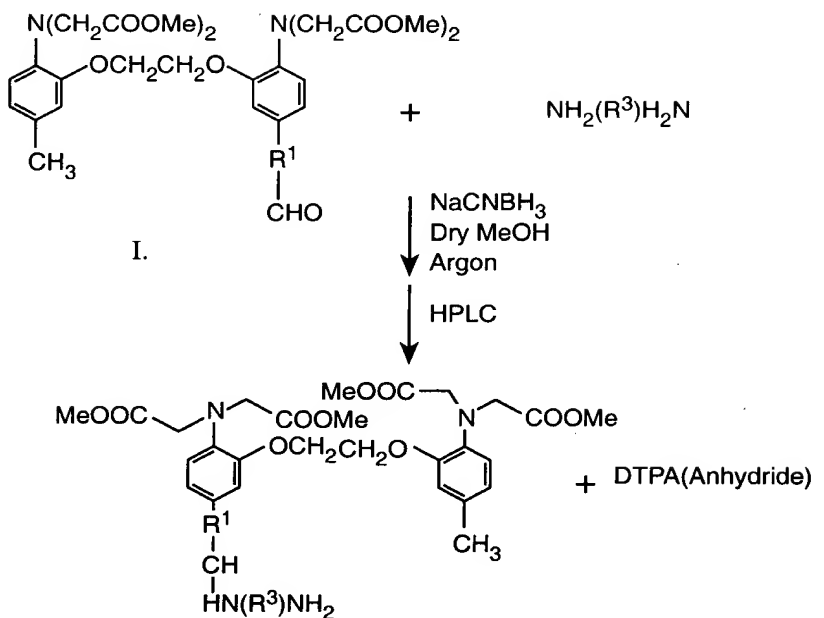
$$\text{R}^2 = \text{NH}_2(\text{R})\text{NCO}$$

$$\text{NaCNBH}_3$$


Rearrangement
 HPLC
 Gd(III)


FIG. 7

7 / 24



II.

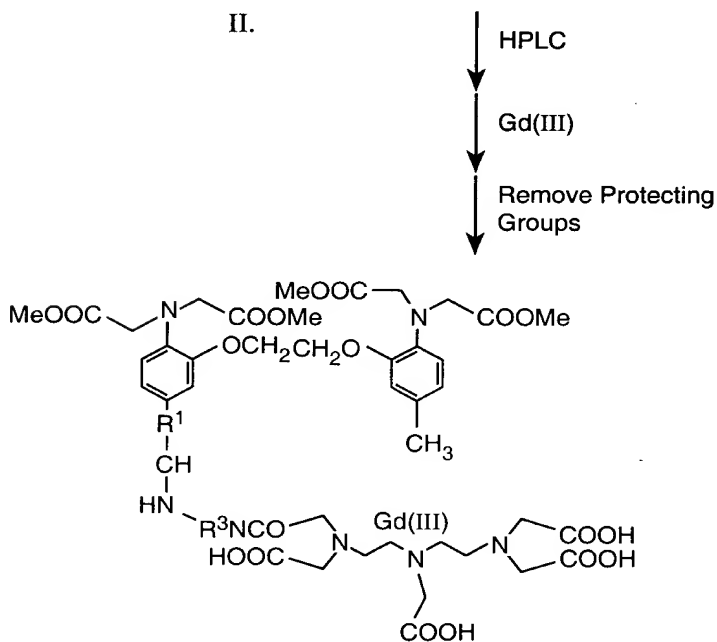
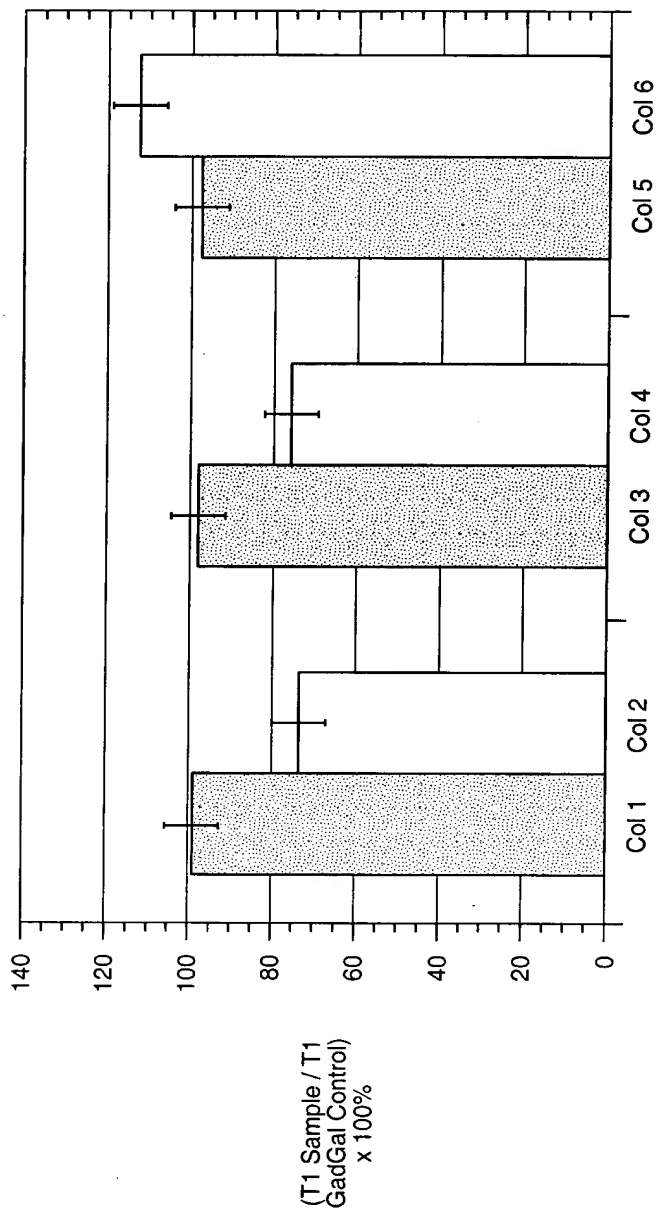
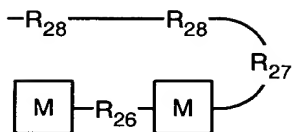
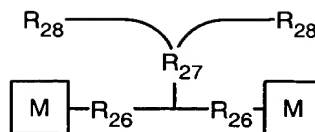
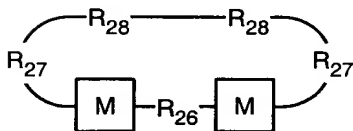
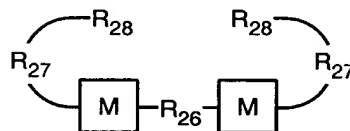
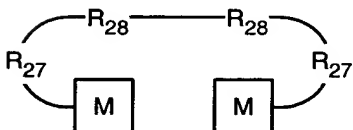
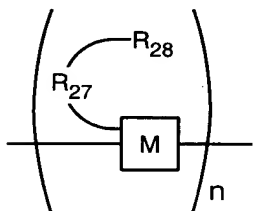
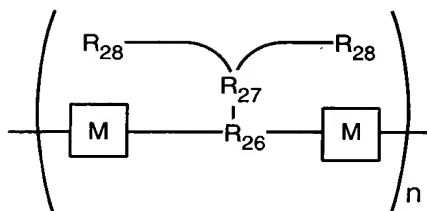
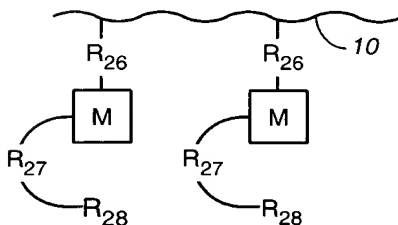
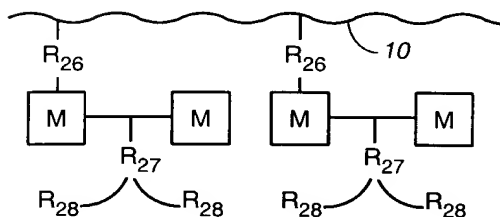


FIG. 8

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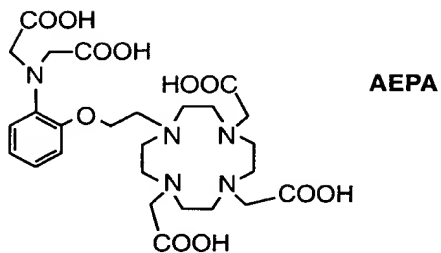
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**FIG._9**

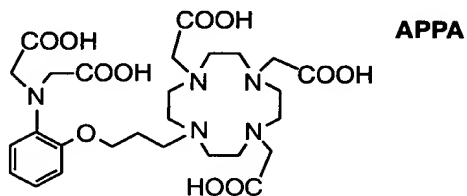
**FIG. 10A****FIG. 10B****FIG. 10C****FIG. 10D****FIG. 10E****FIG. 10F****FIG. 10G****FIG. 10H****FIG. 10I**

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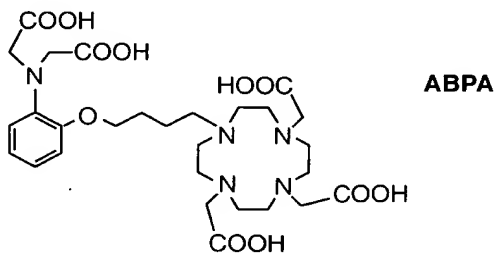
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1-o-aminophenoxy-2-(cyclen)ethane-N,N,N',N'',N'''-pentaacetic acid

FIG._ 11A

1-o-aminophenoxy-3-(cyclen)propane-N,N,N',N'',N'''-pentaacetic acid

FIG._ 11B

1-o-aminophenoxy-4-(cyclen)butane-N,N,N',N'',N'''-pentaacetic acid

FIG._ 11C

0986542.034300

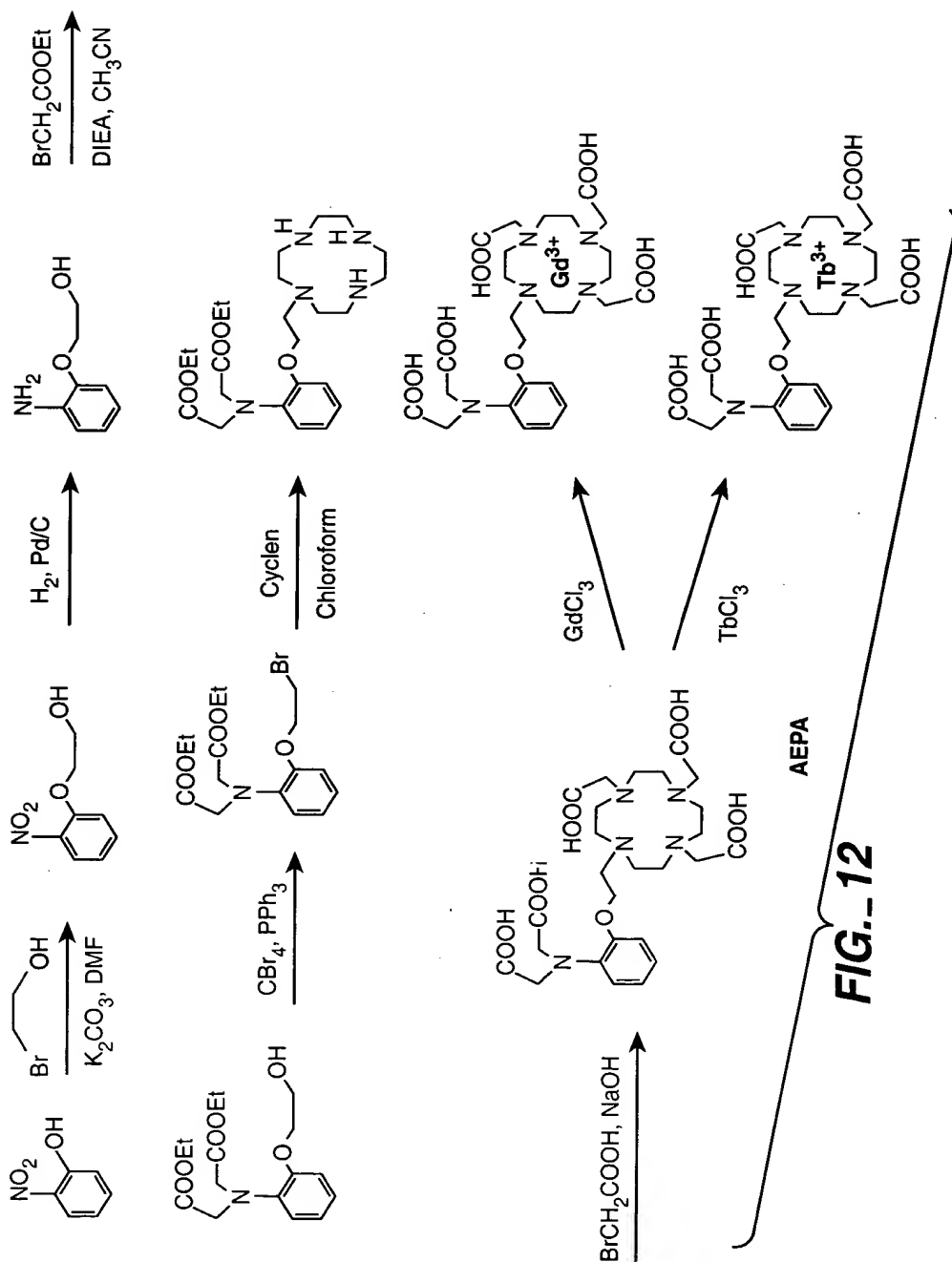




FIG. 13

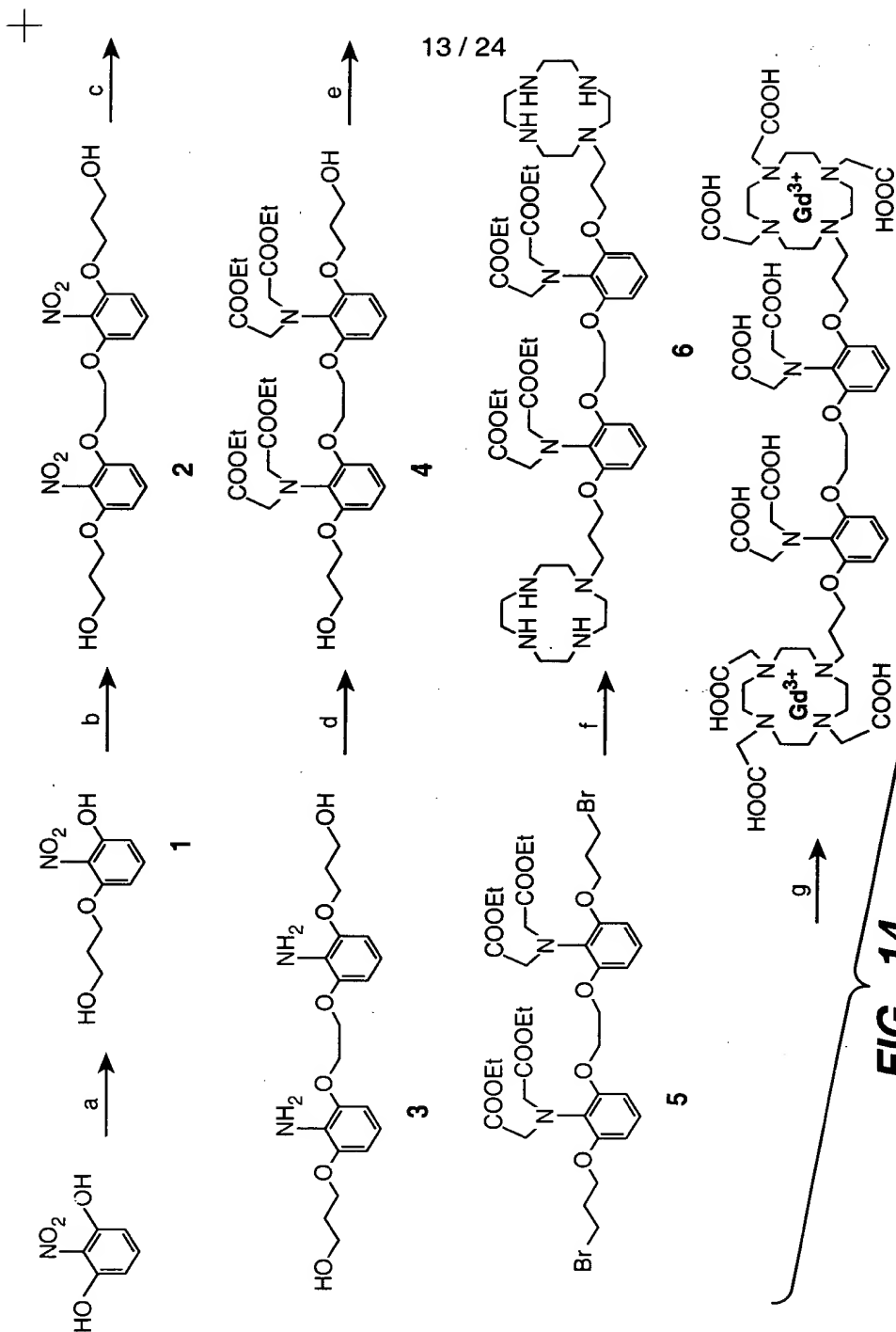
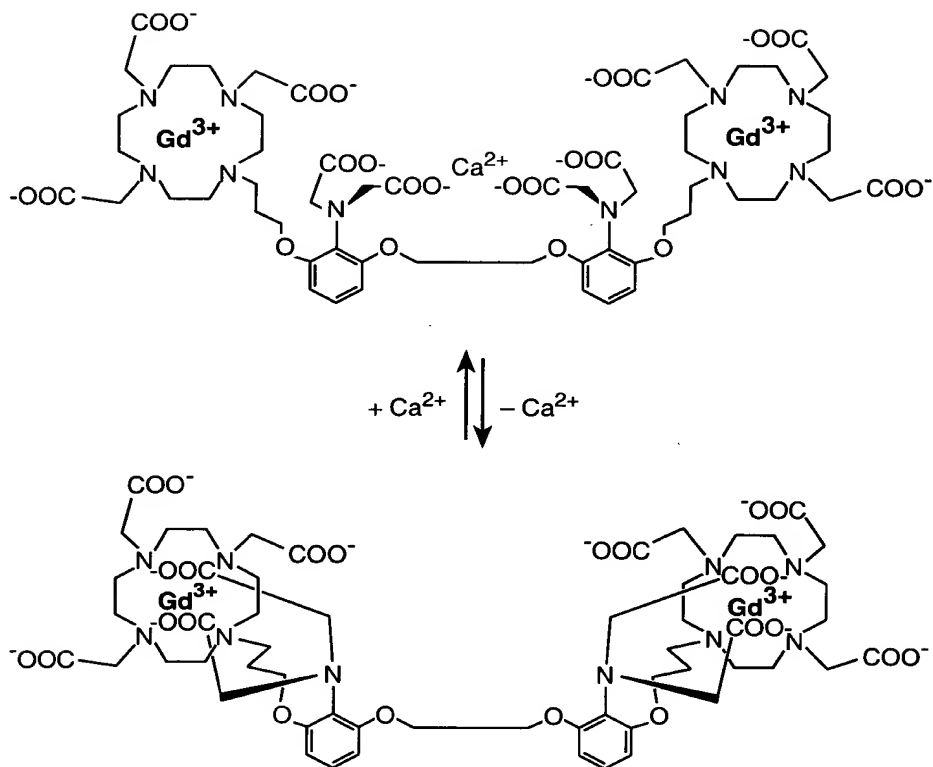


FIG. 14

**FIG. 15**

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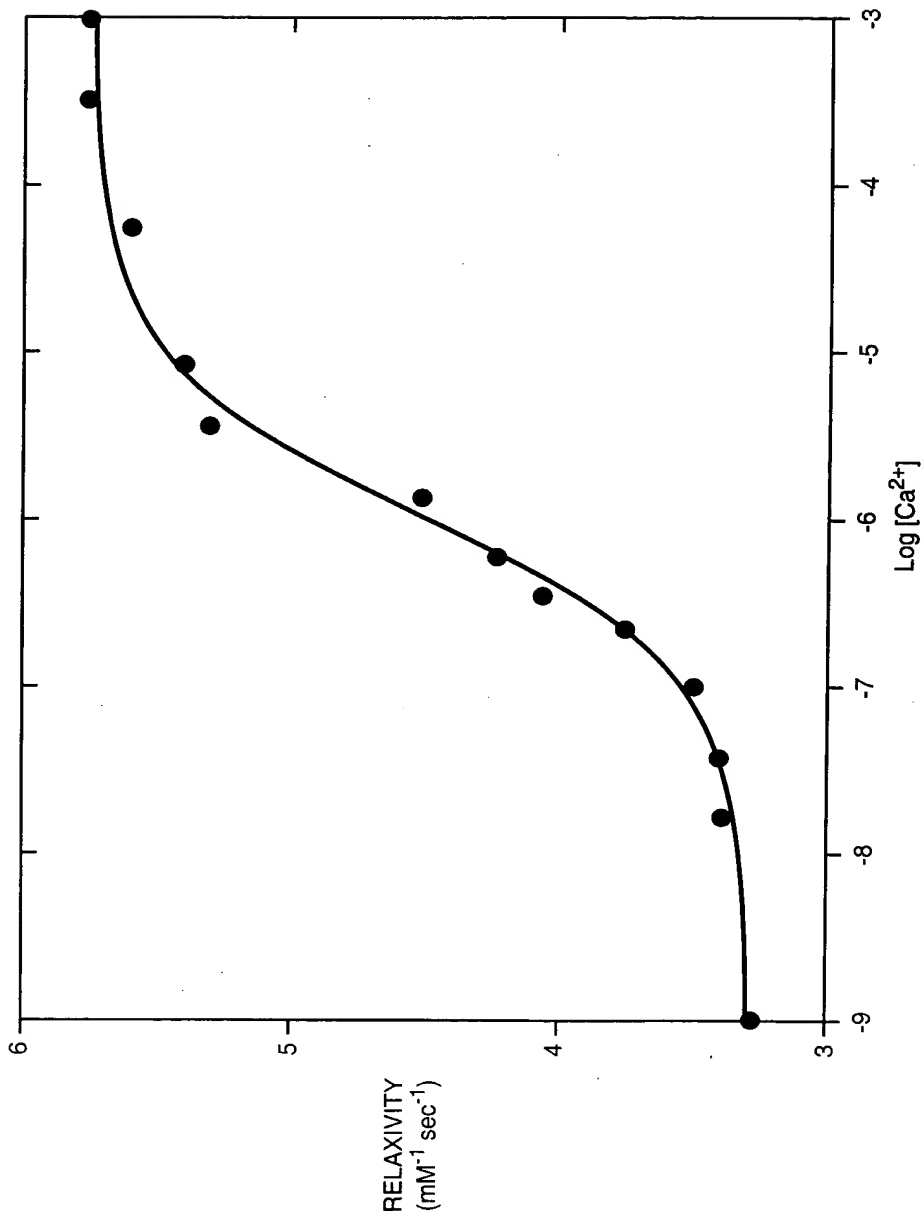


FIG. 16

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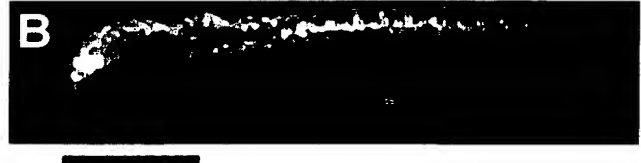
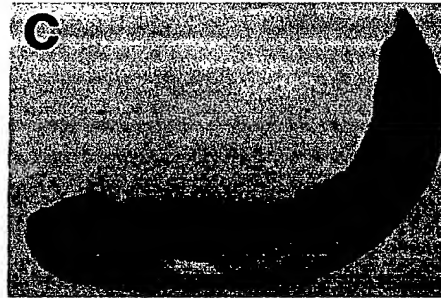
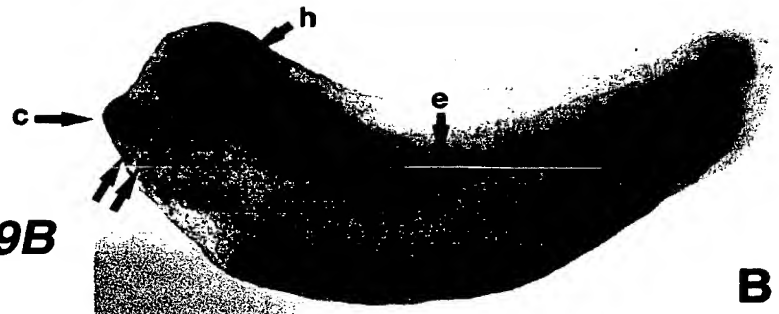
A-58634-7

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-mRNA +mRNA



FIG._17

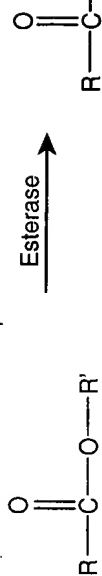
FIG._18A**FIG._18B****FIG._18C****FIG._19A****FIG._19B**

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Esterase Activation

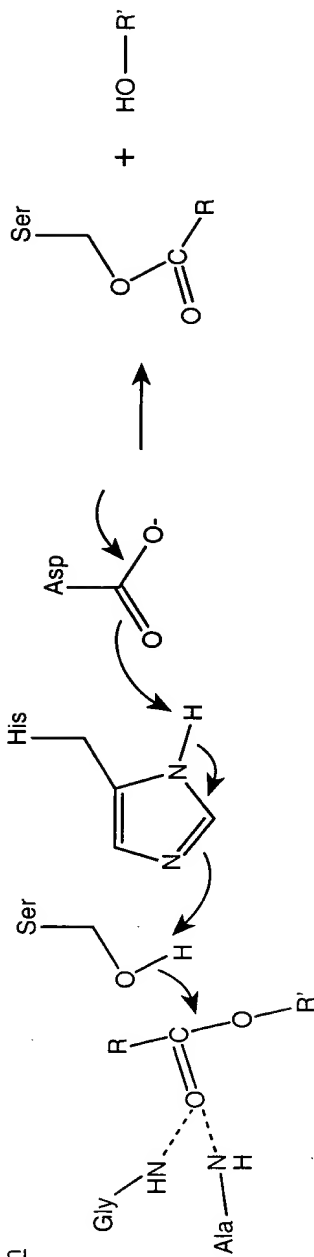
Properties of Carboxylesterases:

1. Efficient Cleavage of Ester Functional Groups



2. Belongs to the Family of Ser-His-Asp Active Site Enzymes (Serine Protease)

Acylation



Deacylation

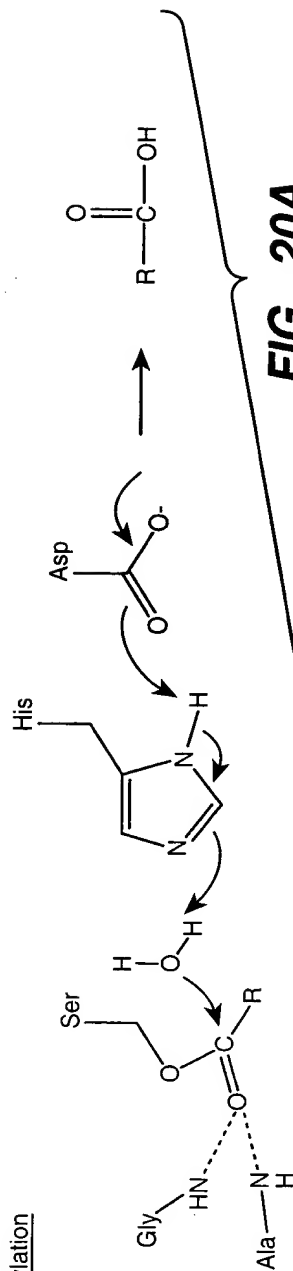
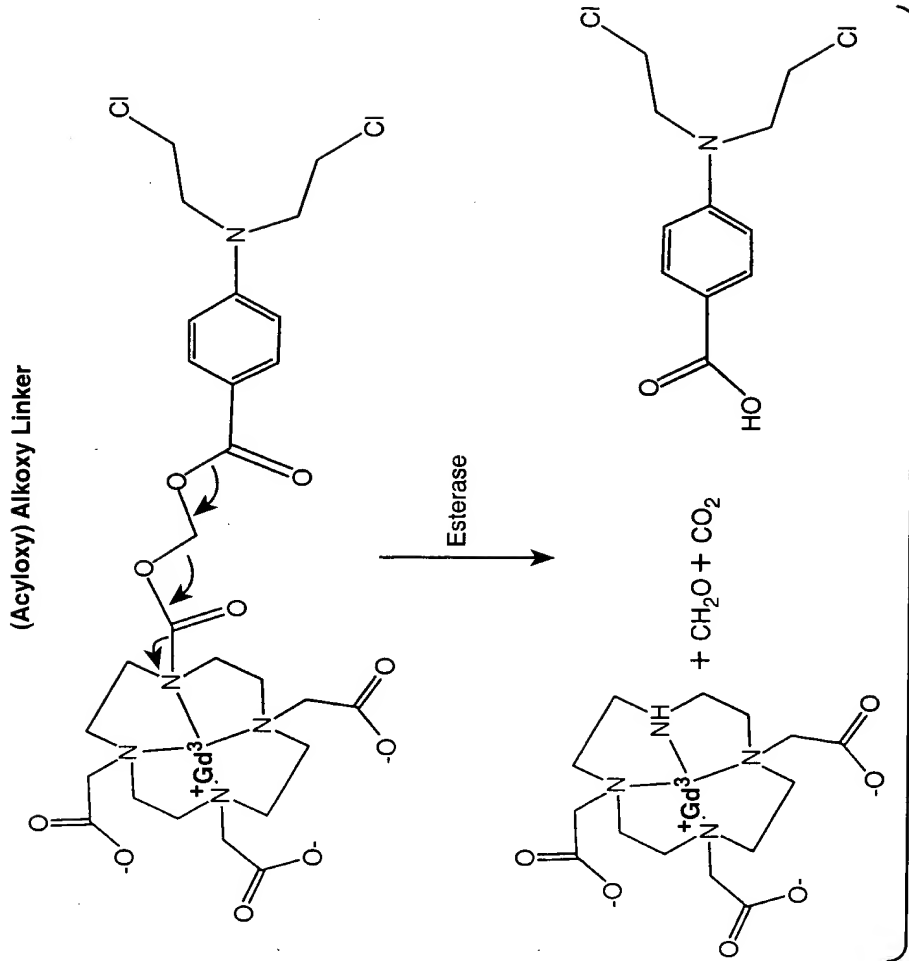
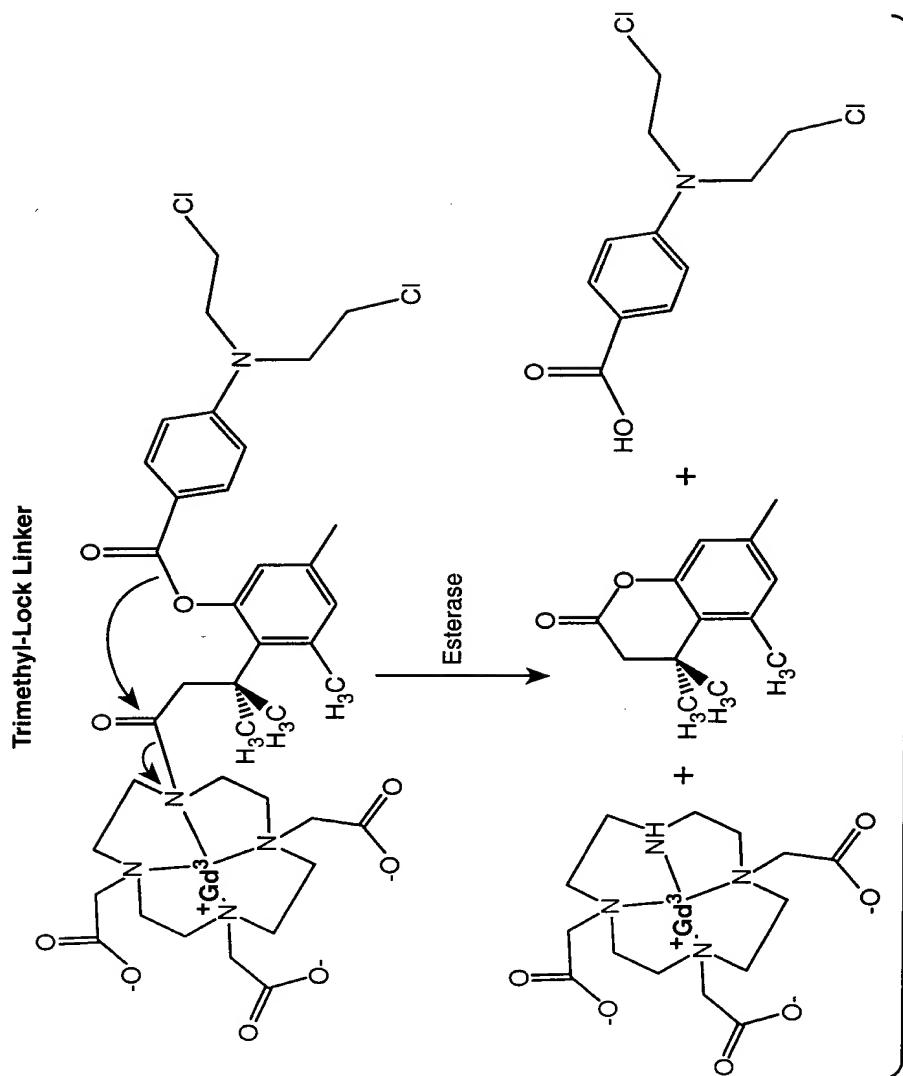
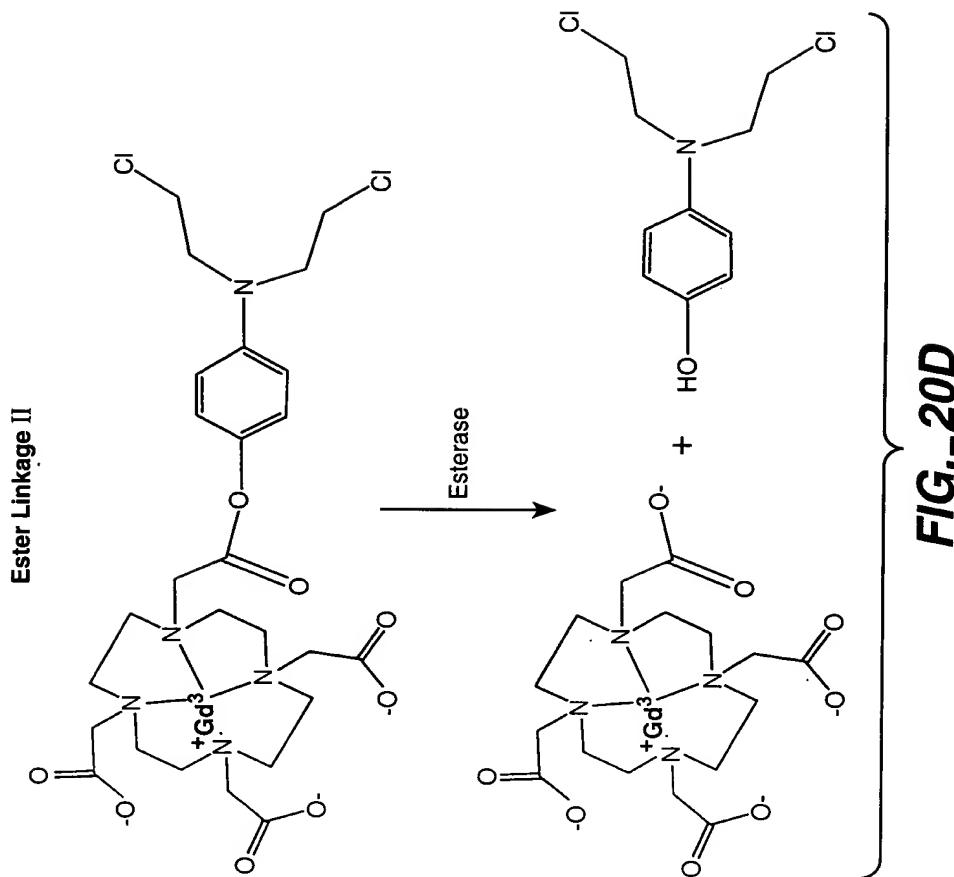


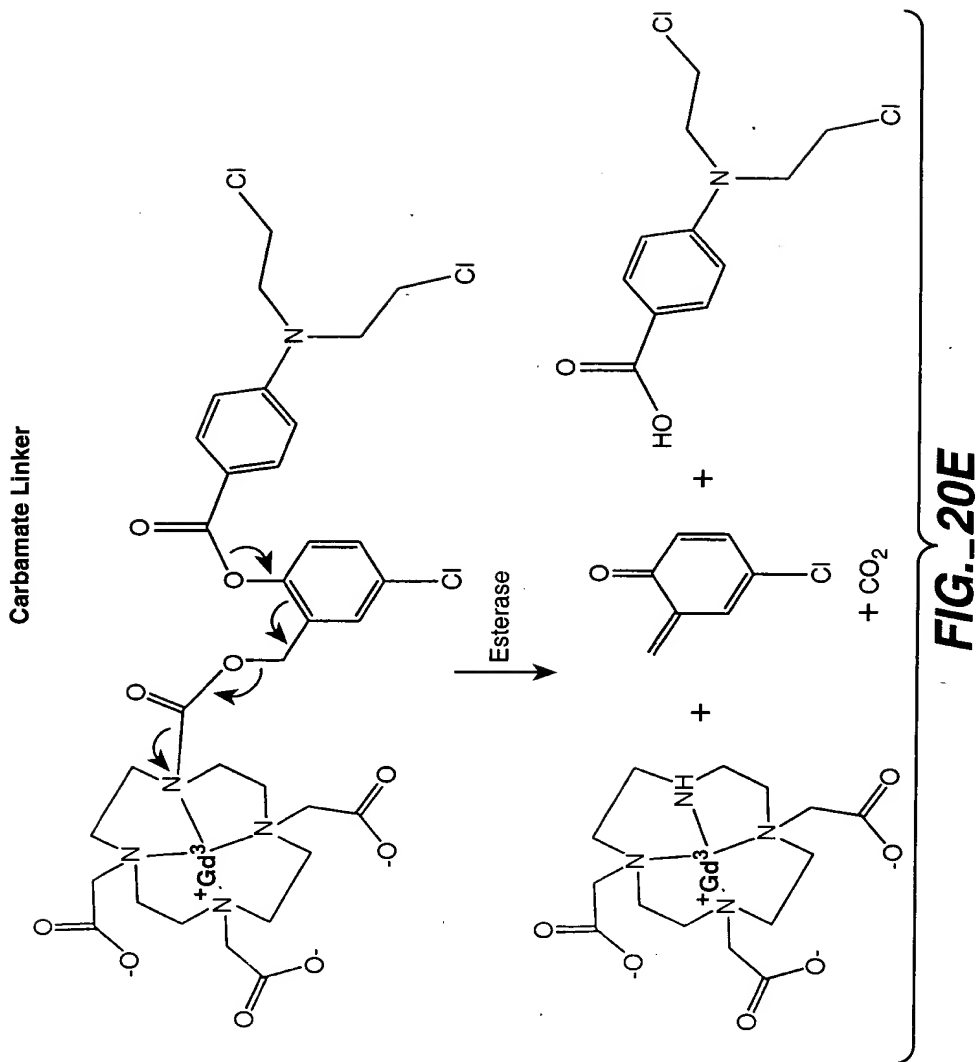
FIG..20A



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**FIG. 20C**

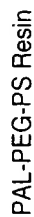




i



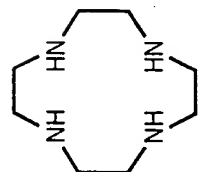
10



Activation with 20% piperidine
in DMF

Fmoc AA-OH/HOAc/HATU/DIEA

1. N- ϵ -Fmoc- ϵ -amino-R acid
[H₂C(CH₂)_x-NH-Fmoc]
2. Fmoc-AA-OH
3. Fmoc-AA-OH
4. (Fmoc-AA-OH)_n
5. Fmoc-Asp-OH



Cyclen

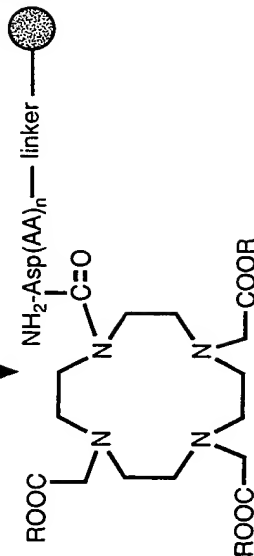
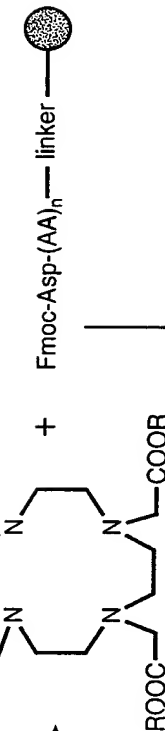
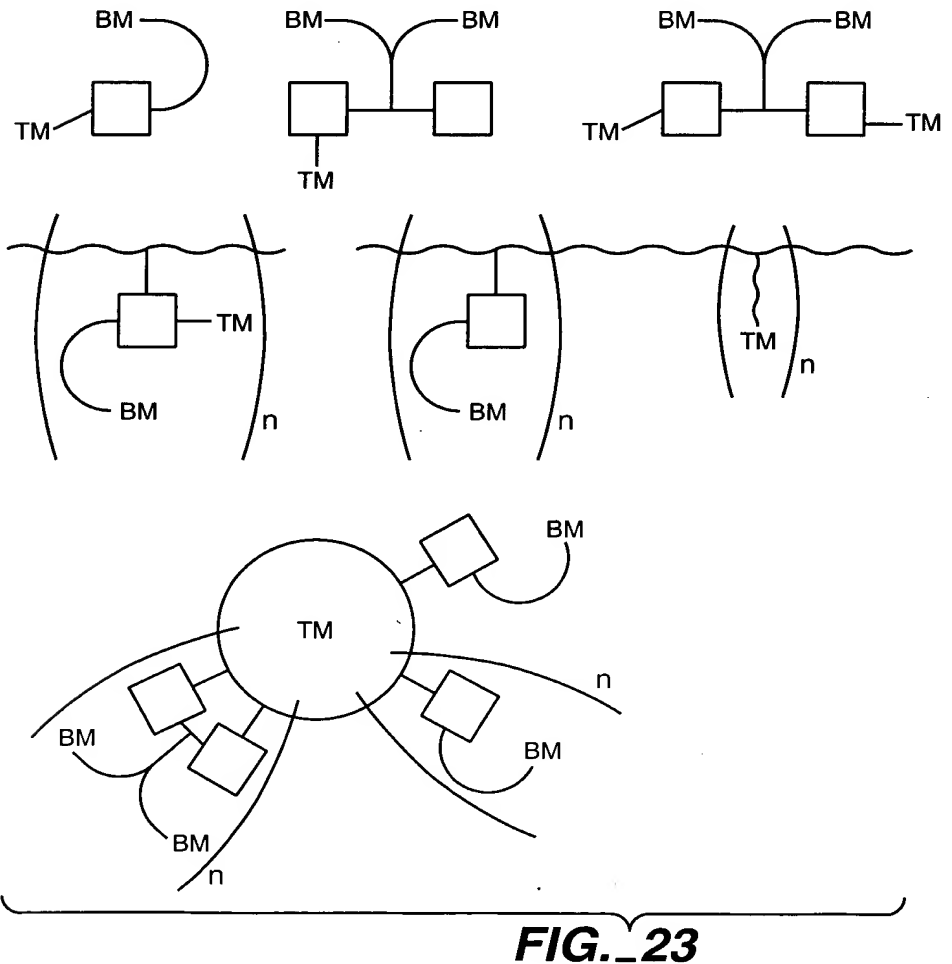
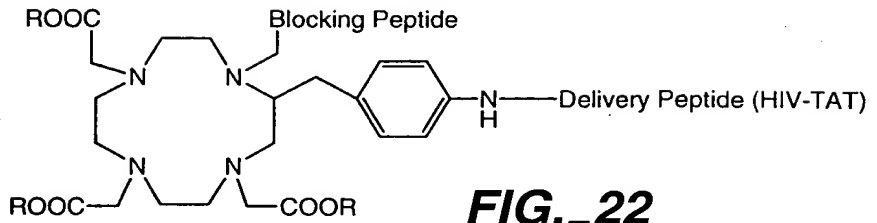


FIG. 21



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